

CLAIMS

We Claim:

1. ~~A device for capturing a target vehicle travelling along a pathway, comprising:~~

first and second support members (70A, 70B);

a flexible barrier (20) which, with the device in at least a deployed condition, is held extending at least partially between said first and second support members at a height that is effective to engage the target vehicle as said target vehicle passes between the support members and having:

an upper barrier member (22) extending generally horizontally across the pathway when the device is in the deployed condition;

a lower barrier member (24) extending generally horizontally across the pathway when the device is in the deployed condition;

a plurality of linking members (26, 28A, 28B, 30A, 30B) extending between the upper and lower barrier members and coupled to the upper and lower members effective to transfer a restraining force applied to at least one of the upper and lower members to the vehicle when the vehicle is engaged to the flexible barrier,

wherein on either side of a barrier median, in at least an area starting about a foot (0.3 m) from the median and continuing to at least about four feet (1.2 m) from the median measured along the lower barrier member, each of the linking members extends between the upper and lower barrier members other than parallel to the median and leave one or more large gaps in the barrier effective so that a vehicle tire overriding the lower barrier member and any lower portion of any linking member will encounter such a gap and, thereby be unable to draw the barrier beneath the vehicle to drive over the barrier.

2. The device of claim 1 wherein each of said linking members along said area extend outward from the median from the lower barrier member to the upper barrier member.

3. The device of claim 1 wherein said linking members include:

a median member (26) extending along the median;

a pair of left and right inboard members (28A, 28B); and

a pair of left and right outboard members (30A, 30B),

wherein along the lower barrier member (24) each inboard member is separated from its associated outboard member by a gap of at least 2 feet (0.6 m).

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4. The device of claim 1 wherein said linking members include:
a pair of left and right inboard members (28A, 28B); and
a pair of left and right outboard members (30A, 30B),

wherein a length of the upper member between associated inboard and outboard linking

- 5 members is less than a length of the lower member between associated inboard and outboard linking members.

5. The device of claim 1 wherein, with the net in the deployed condition, a separation between the upper and lower barrier members is between 4 and 6 feet (1.2 and 1.8 m) at the median.

6. The device of claim 1 wherein the upper, lower and linking members are formed of nylon webbing and wherein a pair of left and right polyester ropes (44) respectively span left and right ends of the upper and lower members and are respectively coupled to left and right braking mechanisms (72A, 72B).

7. The device of claim 6 actuatable from a stowed condition to the deployed condition, in the stowed condition, the barrier is at a height that is effective to permit a non-target vehicle to pass over the barrier as said non-target vehicle passes between the support members, the device further including a pair of left and right elastic members (42), coupled to the upper barrier member to raise the barrier from the stowed condition to the deployed condition and to maintain engagement of the barrier with the target vehicle in an initial phase of impact of the target vehicle with the barrier.

8. The device of claim 7 wherein each elastic member is coupled to the barrier by a nylon cord (40) which has a tensile rupture strength between 75 and 150 lbs (330 and 670 N) which is effective to maintain said initial phase until the barrier is securely engaged to the target vehicle.

9. The device of claim 1 wherein the upper barrier member has a length of from about 10 feet to about 14 feet (about 3.0 to about 4.3 m).

10. The device of claim 1 wherein with the device in its deployed condition and prior to vehicle impact the lower barrier member lies atop the pathway or a barrier enclosure (80) and is not, therefore, suspended.

11. The device of claim 1 characterized in that the upper and lower barrier members are substantially housed, prior to deployment, in an enclosure (80) having a top characterized by at least one hinged cover element (82) moveable from:

a closed condition for storing the first and second elongate flexible members beneath the top and protecting the upper and lower barrier members from vehicles passing over the enclosure,

to:

an open condition in which at least the upper barrier member may be deployed upward past the at least one cover element.

12. The device of claim 1 characterized in that the first and second support members are each capable of being actuated from a compressed condition to an extended condition, the device further characterized by:

a propulsion system (74A, 74B) effective to actuate said first and second support members from said compressed condition to said extended condition.

13. A device for stopping a target vehicle travelling along a pathway on a terrain surface, characterized by:

first and second support members (70A, 70B); and

a flexible barrier (20) held between the first and second support members and having upper (22) and lower (24) members and a plurality of linking members (28A, 28B, 30A, 30B) extending between the upper and lower members, the linking members dimensioned and positioned so that a target vehicle impacting the barrier and causing a tire of the target vehicle to contact at least one of the lower member or linking members will cause such tire to override the contacting member and enter a gap from which the tire will be unable to engage further barrier members to draw the barrier under the vehicle.

14. The device of claim 13 wherein the linking members (28A, 28B, 30A, 30B) are angled so that, upon engagement of the tire with such a linking member, the tire will not be able to ride along such linking member to the upper member when the vehicle normally impacts the barrier.

15. The device of claim 14 wherein the linking members (28A, 28B, 30A, 30B) do not cross over each other intermediate the upper and lower members.

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16. The device of claim 13 wherein no linking member (28A, 28B, 30A, 30B) is angled substantially inward as it extends from the lower member to the upper member.